

***Surrebuttal Testimony of John I. Hirshleifer***

1     A.     Yes. The United States District Court in Delaware, in upholding the decision of the  
2             Delaware Public Service Commission in 1997 to approve a weighted average cost of  
3             capital of 10.28% for UNE pricing, quoted with approval the following findings:

4                     The [Delaware PSC Hearing] Examiners also discounted Vander Weide's  
5                     analysis because he based his cost of equity calculation on the assumption  
6                     that Bell's business was as risky as that of a Standard & Poor's ("S&P")  
7                     300 industrial firm. ... Because these S&P firms employ a variety of  
8                     technologies and enjoy a wide array of market shares, the Hearing  
9                     Examiners concluded that the risks faced by these firms said little about  
10                    the risk Bell faced in the market for unbundled network elements. ...  
11                    Instead, they accepted AT&T's assessment of Bell's risk, which it  
12                    premised upon the risk experienced by other telephone holding companies.

13                   *Bell Atlantic-Delaware, Inc. v. McMahon*, 80 F.Supp.2d 218, 241 (D.Del. 2000)  
14                   (citations omitted).

15  
16             **D.     Dr. Vander Weide's Miscellaneous Criticisms of My DCF**  
17             **Analysis of Equity Costs Are Without Merit**

18  
19     **Q.     DR. VANDER WEIDE PROVIDES MANY ARGUMENTS TRYING TO**  
20             **SUPPORT THE USE OF QUARTERLY COMPOUNDING. (VANDER WEIDE**  
21             **REBUTTAL, PP. 40-42) DOES HE UNDERSTAND YOUR POINT REGARDING**  
22             **WHY THE COMMISSION SHOULD NOT USE QUARTERLY**  
23             **COMPOUNDING?**

24     A.     No. Dr. Vander Weide forgets that UNE rates set by this Commission and other state  
25             commissions are amounts paid to companies like VZ-VA, not to investors. Dr. Vander  
26             Weide's method of calculation would therefore give VZ-VA the benefit of quarterly

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1       compounding which it would not otherwise get. As I noted in my direct testimony, this is  
2       best understood by comparing VZ-VA to a company whose prices are completely  
3       unregulated. Times Mirror Corporation, for example, a newspaper publisher, received its  
4       cash flows from subscribers approximately monthly. It then could reinvest those funds  
5       monthly to increase its return on a monthly compounded basis. When Times Mirror paid  
6       dividends to its investors, it did so quarterly. Therefore, Times Mirror received the  
7       benefit of monthly compounding of its funds, while its investors also got the benefit of  
8       quarterly compounding. It can be clearly seen, however, that Times Mirror never got the  
9       benefit of quarterly compounding. If VZ-VA were allowed a quarterly compounded rate,  
10      its investors would effectively get the benefit of quarterly compounding twice, first when  
11      VZ-VA gets it, and second when investors reinvested their quarterly dividends received  
12      from Verizon.

13   **Q.   DR. VANDER WEIDE SAYS THAT YOUR FAILURE TO MAKE AN EQUITY**  
14   **FLOTATION COST ALLOWANCE IS AKIN TO IGNORING ALL THE**  
15   **EXPENSES OF THE COMPANY (VANDER WEIDE REBUTTAL, PP. 47-49). IS**  
16   **THIS TRUE?**

17   **A.**   Obviously not. For example, Dr. Vander Weide does not make a salary cost adjustment  
18       to the cost of capital, nor does he adjust it for advertising costs, lobbying costs, (or even  
19       for expert witness costs). Similar to flotation costs, these adjustments do not need to be  
20       made to the cost of capital because the market anticipates such costs and incorporates  
21       them in the cash flow expectations for the company. Adding a flotation cost adjustment  
22       would in effect double count the cost of financing.

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1   **Q.    IN ADDITION TO THE ARGUMENTS THAT YOU PRESENTED IN YOUR**  
2       **TESTIMONIES EXPLAINING WHY THE FLOTATION COST ADJUSTMENT**  
3       **IS NOT APPROPRIATE FOR THE TELECOMMUNICATIONS COMPANIES,**  
4       **ARE THERE ANY OTHER REASONS WHY SUCH AN ADJUSTMENT WOULD**  
5       **NOT BE APPROPRIATE FOR VERIZON?**

6   **A.    Yes. Over the past five years Verizon has issued only minor amounts of common stock**  
7       **and has in fact bought back stock. Given the high level of equity in its market capital**  
8       **structure, there is no reason to expect large equity financings in the foreseeable future.**

9       **E.    Dr. Vander Weide's Criticisms of My CAPM Analysis of Equity**  
10      **Costs Are Also Unfounded**

11   **Q.    DR. VANDER WEIDE IMPLIES THAT YOU SHOULD HAVE ABANDONED**  
12       **THE USE OF BARRA BETAS. (VANDER WEIDE REBUTTAL, P. 50) WHAT**  
13       **DO YOU MAKE OF THIS CRITICISM?**

14   **A.    I find it incomprehensible. I indicated that I used the predicted BARRA betas because I**  
15       **was not able to calculate a 5-year historical beta for the then newly-formed Verizon. In**  
16       **my prior testimonies over several years, I had used BARRA betas as a reasonableness**  
17       **check on my historical betas. Dr. Vander Weide implies that BARRA could not supply a**  
18       **predicted beta for Verizon because of data limitations. However, BARRA did in fact**  
19       **provide a predicted beta for Verizon as of June 2000 as part of its beta service and did not**  
20       **indicate any lack of confidence in it. It is further puzzling that Dr. Vander Weide appears**  
21       **to suggest that all predicted BARRA betas are faulty—even if you accepted his incorrect**  
22       **assertion.**

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1 **Q. DR. VANDER WEIDE CLAIMS THAT BARRA PREDICTED BETAS ARE**  
2 **CALCULATED USING EXPLANATORY VARIABLES THAT ARE ALL**  
3 **CALCULATED FROM HISTORICAL DATA. (VANDER WEIDE REBUTTAL,**  
4 **P. 50) IS HE CORRECT?**

5 A. No. Dr. Vander Weide is simply misinformed. For example, one of the variables used by  
6 BARRA is the analysts' mean growth forecast.

7 **Q. BY CRITICISING BARRA BETAS DR. VANDER WEIDE IMPLIES THAT YOU**  
8 **SHOULD HAVE INSTEAD USED VALUE LINE BETAS. (VANDER WEIDE**  
9 **REBUTTAL P. 50.) ARE VALUE LINE BETAS CALCULATED USING**  
10 **PURELY HISTORICAL FIVE-YEAR RETURNS?**

11 A. Yes. Therefore, according to Dr. Vander Weide's own logic, Value Line's beta for  
12 Verizon is precisely the beta I should *not* be using because of "data factors."

13 **Q. HAS VALUE LINE COMPUTED BETAS FOR VERIZON SINCE THE MERGER**  
14 **OF BELL ATLANTIC AND GTE?**

15 A. It does not appear so. For example, the April 6, 2001 Value Line report on Verizon  
16 indicates that the beta is "NMF", meaning that Value Line could not measure it according  
17 to its techniques. This report was issued over nine months after the close of the merger.

18 **Q. WHAT IS YOUR RESPONSE TO DR. VANDER WEIDE'S CRITICISM**  
19 **REGARDING ADJUSTMENTS FOR BETAS LESS THAN 1? (VANDER WEIDE**  
20 **REBUTTAL, P. 58)**

21 A. First, Dr. Vander Weide fails to point out that there is no general agreement that betas  
22 should be adjusted, and if so, how they should be adjusted. The rationale for adjusting  
23 raw betas is to reduce measurement error. As I discuss extensively in my testimony, I

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1 attempt to adjust for measurement error through the process of averaging, a technique  
2 commonly employed. BARRA utilizes its own models for adjusting betas. According to  
3 BARRA studies, BARRA predicted betas have more than 16 times the predictive power  
4 of historical betas.<sup>41</sup> Ibbotson Associates, as another example, uses 5 year regressions of  
5 monthly returns against the S&P 500 and weighs the individual company's beta with the  
6 average beta for the corresponding *industry*.<sup>42</sup> Compustat makes no adjustments to its  
7 betas.

8 **Q. DR. VANDER WEIDE IMPLIES THAT ONE SHOULD USE 5-YEAR**  
9 **HISTORICAL VALUE LINE BETAS. IS THIS CONSISTENT WITH HIS PRIOR**  
10 **TESTIMONY?**

11 A. No. In rebuttal testimony filed in many other proceedings, Dr. Vander Weide has  
12 vigorously objected to the use of historical betas computed over a 5-year time period  
13 because in his opinion they were not sufficiently forward-looking proxies for risk. It is  
14 therefore extraordinary that he now suggests that one can use 5-year Value Line betas.

15 In his 1994 testimony before the FCC, for example, Dr. Vander Weide  
16 specifically criticized MCI witness Kahal's use of Value Line betas for:

17 fail[ing] to recognize that some of Value Line's risk indicators he  
18 relies on ... encompass a five-year time period that is too long to  
19 reveal recent increases in the risk of investing in  
20 telecommunications.<sup>43</sup>

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<sup>41</sup> Barr Rosenberg, "Prediction of Common Stock Betas", Reprinted with permission from *The Journal of Portfolio Management*, Winter, 1985, on [www.Barra.com/ResearchPub/NonBarraPub/pocs/pocs-j.html](http://www.Barra.com/ResearchPub/NonBarraPub/pocs/pocs-j.html).

<sup>42</sup> Ibbotson Associates, *SBBI: Valuation Edition 2000 Yearbook*, pp. 96-97.

<sup>43</sup> Affidavit of Dr. James H. Vander Weide In Support of Reply Comments of Bell Atlantic, Before the Federal Communications Commission, CC Docket 94-1, June 29, 1994, p.19-20, ¶32.

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1 To "more accurately measure the changed risk of investing in  
2 telecommunications," Dr. Vander Weide computed two-year weekly betas.

3 In New Jersey, Dr. Vander Weide testified:

4 Q. Did you also perform a capital asset pricing model (CAPM)  
5 analysis of the cost of equity?

6 A. No. One of the major inputs to the CAPM is beta—a measure of  
7 the relative risk of a security to that of the market as a whole. Betas  
8 are estimated using historical security prices, usually over the past 60  
9 month period. The use of a methodology which relies on historical  
10 data over this lengthy period of time would be particularly  
11 inappropriate in this case. The enormous changes that the  
12 telecommunications industry has recently undergone would render  
13 such historical measures of relative risk virtually useless in  
14 estimating the forward-looking cost of equity.<sup>44</sup>

15 Recall that Dr. Vander Weide's primary argument in this proceeding for not using  
16 telephone holding companies for his comparable sample is his belief that "the THCs ...  
17 are experiencing radical restructuring and profound regulatory, organizational and  
18 technological change."

19 In his 1996 rebuttal testimony in the same New Jersey proceeding, Dr. Vander  
20 Weide suggested that *one-year* betas would be appropriate.<sup>45</sup> In his 1997 rebuttal  
21 testimony before the State Corporation Commission of Virginia, Dr. Vander Weide  
22 calculated *two-year* weekly betas.<sup>46</sup>

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<sup>44</sup> Direct Testimony of Dr. James H. Vander Weide on Behalf of Bell Atlantic-New Jersey, Docket No. TX95120631, November 4, 1996, p. 21, at line 10-20.

<sup>45</sup> Rebuttal Testimony of Dr. James H. Vander Weide on Behalf of Bell Atlantic-New Jersey, Docket No. TX95120631, December 20, 1996, p.33, at lines 7-12.

<sup>46</sup> Rebuttal Testimony of Dr. James H. Vander Weide on Behalf of Bell Atlantic-Virginia, Case No. PUC970005, June 10, 1997, p. 95.

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1   **Q.   HAS DR. VANDER WEIDE TESTIFIED REGARDING FORWARD-LOOKING**  
2       **BETAS?**

3   A.   Yes. Dr. Vander Weide stated in his direct testimony filed on behalf of Bell Atlantic-New  
4       Jersey on November 4, 1996, that “if one is to use such a method [CAPM], one should  
5       use a forward-looking beta which measures the future risk of the company.”<sup>47</sup>

6   **Q.   HAVE YOU CONSIDERED FORWARD-LOOKING BETAS?**

7   A.   Yes. As already noted, I used predicted betas provided by BARRA. These predicted  
8       betas include changing fundamental and market data which are incorporated in the beta.

9   **Q.   REGARDING THE EQUITY RISK PREMIUM TO BE USED IN THE CAPM,**  
10       **DR. VANDER WEIDE HAS TESTIFIED THAT IBBOTSON ASSOCIATES’ 2001**  
11       **YEARBOOK CONTINUES TO SPECIFICALLY RECOMMEND THAT A**  
12       **HISTORICAL RISK PREMIUM BASED ON THE 1926-PRESENT PERIOD**  
13       **SHOULD BE USED. (VANDER WEIDE REBUTTAL, P. 57) WHAT DOES IT IN**  
14       **FACT SAY IN THE 2001 YEARBOOK?**

15   A.   It says specifically that “[a] proper estimate of the equity risk premium requires a *data*  
16       *series long enough* to give a reliable average without being unduly influenced by very  
17       good and very poor short-term returns.”<sup>48</sup> (*emphasis added*). It also says that the “period  
18       starting with 1926 is *representative* of what can happen: it includes high and low returns,  
19       volatile and quiet markets, war and peace, inflation and deflation, and prosperity and

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<sup>47</sup> Direct Testimony of James H. Vander Weide on Behalf of Bell Atlantic-New Jersey, Docket No. TX95120631, November 4, 1996, p. 21.

<sup>48</sup> Ibbotson Associates, Yearbook 2000, Valuation Edition, p. 65.

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1       depression.”<sup>49</sup> (*emphasis added*) Ibbotson Associates also continues that “because  
2       historical event-types (not specific events) tend to repeat themselves, long-run capital  
3       market return studies can reveal a great deal about the future.”<sup>50</sup>

4               It is also worth noting that—while Ibbotson Associates disagrees with the  
5       approach—it explicitly acknowledges that some analysts calculate expected risk premia  
6       over shorter time periods.<sup>51</sup>

7       **Q.     DOES ROGER IBBOTSON HIMSELF STATE THAT THE EQUITY RISK**  
8       **PREMIUM ESTIMATE SHOULD ALSO CONSIDER FORWARD-LOOKING**  
9       **APPROACHES?**

10      **A.     Yes. Roger Ibbotson, who is a professor of finance at Yale, states that:**

11               The historical payoff for risk is a good guide to the future risk  
12               premium, but it is *not perfect*. First, there is considerable estimation  
13               error even assuming the 74 years returns were drawn from a  
14               stationary distribution. ...

15               Another way to estimate the ERP [equity risk premium] is to  
16               recognize that the stock market is a part of the economy. ... The  
17               supply side estimate of the stock market [risk premium] is  
18               *substantially lower than the historical ERP*. ...

19               Overall, *I think the best estimate of the ERP is to use some*  
20               *combination of the historical ERP and the supply side estimate of the*  
21               *ERP.*<sup>52</sup> [*emphasis added*]

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<sup>49</sup> *Id.*, p. 66.

<sup>50</sup> *Ibid.*

<sup>51</sup> *Ibid.*

<sup>52</sup> Research Roundtable: The Equity Premium, June 30, 2000. (<http://ssrn.com/forum/>).



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1 **Q. YOU MENTIONED EARLIER THAT DR. VANDER WEIDE SUGGESTS THAT**  
2 **YOU SHOULD ONLY CONSIDER THE FULL 1926-PRESENT IBBOTSON**  
3 **DATA PERIOD FOR EQUITY RETURNS WHEN TRYING TO EVALUATE A**  
4 **RISK PREMIUM. (VANDER WEIDE REBUTTAL, P. 57) HAS DR. VANDER**  
5 **WEIDE FOLLOWED HIS OWN RULE CONSISTENTLY?**

6 A. No. In his direct testimony on behalf of GTE South filed in Virginia on June 9, 1995, Dr.  
7 Vander Weide chose the period starting in 1937 on the theory that it would be “most  
8 meaningful” to use S&P 500 data after the passage and implementation of the Public  
9 Utility Holding Company Act of 1935.

10 **Q. DO FINANCIAL PROFESSIONALS ALWAYS RELY ON HISTORICAL RISK**  
11 **PREMIA?**

12 A. No. I have provided numerous citations of leading scholars and practitioners on this  
13 subject in my direct testimony. Additionally, John Bogle, Chairman and Founder of The  
14 Vanguard Group which runs mutual funds and has assets of \$560 billion, stated at the  
15 Financial Analysts Seminar Sponsored by the Association for Investment Management  
16 and Research that:

17 Looking out over time, from the price levels in today’s market, a 2%  
18 risk premium might be a reasonable guess for the coming decade.  
19 Indeed, many respected investment advisers might place the  
20 probable number at less than 2%.

21 Well, I’m often wrong (seldom in doubt), so first let’s explore what a  
22 normal equity premium might be. I went to the acknowledged  
23 authority on the subject, best-selling author (‘Stocks for the Long  
24 Run’) and Wharton School Professor Jeremy J. Siegel. He  
25 obligingly sent me a two-century history of equity premiums on U.S.  
26 stocks over long-term U.S. Treasury bonds. The average equity  
27 premium over this long, long period is 3.5%. I will leave it to you to

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1 decide what is a fair number to use today, but, for the rest of my  
2 analysis. I'm going to rely on this average.<sup>53</sup>

3 Another distinguished academic, Alfred Rappaport, states that:

4 *The premium should be based on expected rates of return rather*  
5 *than average historical rates. This approach is crucial because with*  
6 *the increased volatility of interest rates over the past two decades the*  
7 *relative risk of bonds has increased, thereby lowering risk premiums*  
8 *to a range from 3 to 5 percent. Those who estimate the market risk*  
9 *premium as the long-run average excess of stock returns over*  
10 *government bond returns will typically obtain a figure in the 7 to 9*  
11 *percent range. This historical approach ignores that market risk*  
12 *premiums vary over time and at the present time can lead to*  
13 *significant undervaluation.*<sup>54</sup> [emphasis added]

14 Michael Mauboussin, Chief U.S. Investment Strategist at Credit Suisse First  
15 Boston and Adjunct Professor at Columbia Business School, believes that the equity risk  
16 premium used in the CAPM model should be estimated *ex ante*:

17 Ex-post definitions come with a lot of calculational baggage, most  
18 notably choice of time period and data non-stationarity. ...[U]se a  
19 long-term discounted cash flow model to estimate expected return,  
20 and then subtract a long-term Treasury yield to estimate the ex-ante  
21 ERP.<sup>55</sup>

22 He believes that the risk premium has been in a range of 2-5% in recent years and  
23 states that Credit Suisse First Boston uses about 4.0%.

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<sup>53</sup> John C. Bogle, "The Riddle of Performance Attribution: Who's In Charge Here--Asset Allocation or Cost?" Remarks Before the Financial Analysts Seminar Sponsored by the Association for Investment Management and Research, At Northwestern University, Evanston, Illinois, July 20, 1997. (Published at [www.vanguard.com](http://www.vanguard.com)).

<sup>54</sup> Rappaport, Alfred, *Creating Shareholder Value*, The Free Press, New York, 1998, p. 39.

<sup>55</sup> Research Roundtable: The Equity Premium, June 30, 2000. (<http://ssrn.com/forum/>).

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1 Eugene Fama, Professor of Finance at the University of Chicago, estimates the  
2 expected equity premium to be about 1-2%.<sup>56</sup> John Cochrane, Professor of Finance at the  
3 University of Chicago, believes that the risk premium is about or below 3-4%.<sup>57</sup>

4 Jay Ritter, Professor at the University of Florida, states:

5 In the 1980s, I followed the textbook mantra that the equity risk  
6 premium should be based on extrapolating the historical average into  
7 the future. By the late 1980s, I began to realize how wrong this was,  
8 as the Japanese market soared. This approach predicted that in the  
9 1990s there would be extremely high returns on Japanese stocks, just  
10 as today it implies that there will be unrealistically high returns on  
11 US stocks in the future.<sup>58</sup>

12 **Q. HAS DR. VANDER WEIDE STATED IN THE PAST HIS BELIEF THAT THE**  
13 **MARKET RISK PREMIUM VARIES OVER TIME?**

14 A. Yes. In his testimony before the State Corporation Commission of Virginia, Dr. Vander  
15 Weide stated that the equity risk premia over bonds "vary with the level of interest  
16 rates."<sup>59</sup>

17 **Q. ISN'T THE IBBOTSON ASSOCIATES APPROACH TO ESTIMATING THE**  
18 **EQUITY RISK PREMIUM FOUNDED ON THE THEORY THAT THE TRUE**  
19 **RISK PREMIUM IS STABLE OVER TIME?**

20 A. Yes. Ibbotson Associates states that:

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<sup>56</sup> *Ibid.*

<sup>57</sup> *Ibid.*

<sup>58</sup> *Ibid.*

<sup>59</sup> Direct Testimony of Dr. James H. Vander Weide, Before the State Corporation Commission of Virginia, On Behalf of Central Telephone Company of Virginia, The Chesapeake and Potomac Telephone Company of Virginia, Contel of Virginia, Inc., GTE South Incorporated, United Telephone - Southeast, Inc., Case No. PUC920029, p. 48, at 1-5.

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1 [T]he expected equity risk premium is unobservable in the market  
2 and therefore must be estimated. ... In using a historical measure of  
3 the equity risk premium, one assumes that what has happened in the  
4 past is representative of what might be expected in the future. In  
5 other words, the assumption one makes when using historical data to  
6 measure the expected equity risk premium is that the relationship  
7 between the returns of the risky asset (equities) and the riskless asset  
8 (Treasuries) is stable.<sup>60</sup>

9 Consequently, if Dr. Vander Weide believes that the risk premium varies with  
10 interest rates, he cannot consistently advocate the Ibbotson approach.

11 **Q. DR. VANDER WEIDE ARGUES THAT PROFESSOR CORNELL STATED IN**  
12 **HIS BOOK THAT THE IBBOTSON APPROACH TO ESTIMATING THE RISK**  
13 **PREMIUM IS APPROPRIATE. (VANDER WEIDE REBUTTAL, PP. 54-55) IS**  
14 **DR. VANDER WEIDE FAMILIAR WITH THE CURRENT THINKING ON THIS**  
15 **SUBJECT?**

16 A. Apparently not. Professor Cornell's book cited by Dr. Vander Weide was published in  
17 1993 and written some time before that date. Since 1993 a vast amount of literature has  
18 been published regarding the equity risk premium: Ibbotson and Brinson<sup>61</sup> and  
19 Blanchard<sup>62</sup> published their research findings in 1993; Siegel<sup>63</sup> in 1994; Brown,  
20 Goetzmann and Ross<sup>64</sup> in 1995; Rappaport<sup>65</sup> in 1998; Glassman and Hassett<sup>66</sup> in 1999;

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<sup>60</sup> Ibbotson Associates, *SBBI: Valuation Edition 2000 Yearbook*, p. 53.

<sup>61</sup> Ibbotson, Roger, and Gary P. Brinson, *Global Investing: The Professional's Guide to the World Capital Markets*, McGraw-Hill, 1993, at p. 45.

<sup>62</sup> Blanchard, Oliver, "Movements in the Equity Premium", *Brookings Papers on Economic Activity*, 75 (2) 1993.

<sup>63</sup> Siegel, Jeremy, *Stocks for the Long Run*, Irwin, New York, 1994.

<sup>64</sup> Brown, Stephen J., William N. Goetzmann and Stephen A. Ross, "Survival", *The Journal of Finance*, Vol. L, No. 3, July 1995.

<sup>65</sup> Rappaport, Alfred, *Id.*

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1       etc. Numerous articles have also been published noting the low equity risk premium. In  
2       1999 Professor Cornell published an entire book devoted to subject of the equity risk  
3       premium.<sup>67</sup> Professor Cornell concluded that the equity risk premium at the time of the  
4       writing of his book was in the range of 3.5% - 5.5%. My review of all of these sources  
5       indicates that a 5.5% premium over long-term Treasury bonds appears to be conservative,  
6       and may substantially overstate the actual current forward-looking expected risk  
7       premium.

8       **Q.   DR. VANDER WEIDE CLAIMS THAT HE HAS CALCULATED THE COST OF**  
9       **EQUITY FOR THE S&P 500 USING THE SAME METHODOLOGY THAT YOU**  
10      **USED FOR PRIOR TESTIMONIES BUT DID NOT DO FOR THIS**  
11      **PROCEEDING, AND ARRIVED AT A COST OF EQUITY OF 10.93%, HIGHER**  
12      **THAN MERRILL LYNCH'S COST OF EQUITY ESTIMATE OF 10.20%.**  
13      **(VANDER WEIDE REBUTTAL TESTIMONY P. 52) ASSUMING THAT HE DID**  
14      **THIS CORRECTLY, DOES THIS CAUSE ANY CONCERN TO YOU?**

15      A.   Not at all. As explained in my direct testimony, this forward-looking cost of equity  
16      estimate was utilized as one of several analysis tools for estimating the equity risk  
17      premium. Assuming that Dr. Vander Weide's calculations are correct, this 10.93%  
18      estimate could also be used. Substituting 10.93% for 10.20% in Exhibit 6 to my direct  
19      testimony yields forward-looking estimates of 6.00% over the long-run expected one-  
20      month Treasury bill yield and 4.67% over the 20-year Treasury bond yield. However, in

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<sup>66</sup> Glassman, James K., and Kevin A. Hassett, *DOW 36,000: The New Strategy for Profiting from the Coming Rise in the Stock Market*, Times Books, 1999.

<sup>67</sup> Cornell, Bradford, *The Equity Risk Premium: The Long-Run Future of the Stock Market*, John Wiley & Sons, 1999.

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1 my CAPM calculations I used risk premia estimates conservatively *higher* than these  
2 estimates: 7.5% over long-run expected one-month Treasury bill yields and 5.5% over  
3 20-year treasury bond yields.

4 **Q. SHOULD THE FACT THAT MERRILL LYNCH ESTIMATED AN EXPECTED**  
5 **RETURN (I.E., THE FORWARD-LOOKING COST OF EQUITY) FOR THE**  
6 **MARKET OF 10.20% CAUSE DR. VANDER WEIDE TO QUESTION HIS HIGH**  
7 **COST OF CAPITAL ESTIMATE OF 12.95%?**

8 A. Yes. Merrill Lynch is a sophisticated investment firm and also has been a financial  
9 adviser to Bell Atlantic through at least two mergers with other giant telephone holding  
10 companies. This is an obvious sanity check, similar to the costs of capital and discount  
11 rates used by analysts, and by other investment banks in fairness opinions.

12 **Q. DR. VANDER WEIDE CLAIMS THAT YOU HAVE MISSTATED THE**  
13 **HISTORICAL EQUITY RISK PREMIUM CALCULATED OVER THE PERIOD**  
14 **1926-1999 (VANDER WEIDE REBUTTAL P. 57). HAVE YOU?**

15 A. No. He is again mistaken. Dr. Vander Weide assumes that I have simply taken the  
16 arithmetic risk premium from the Ibbotson Associates Yearbook. Ibbotson Associates  
17 calculates its arithmetic mean risk premium by taking the difference between the average  
18 large company stock total returns (13.3%) and long-term government bond *income*  
19 returns (5.2%).<sup>68</sup> Contrary to Dr. Vander Weide's assumption, I have calculated a range  
20 of risk premia using geometric and arithmetic averages. My calculation<sup>69</sup> of the

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<sup>68</sup> Ibbotson Associates, *Stock Bonds Bills and Inflation 2000 Yearbook*, pp. 124 and 185.

<sup>69</sup> In my calculations, I utilized return data from both Ibbotson Associates and Dimensional Fund Advisers. Ibbotson Associates and DFA returns differ only due to minor rounding.

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1 arithmetic average differs from that used by Ibbotson Associates because I take the  
2 difference between the averages of large company stock total returns (13.3%) and long-  
3 term government bond *total* returns (5.5%).<sup>70</sup>

4 **Q. DR. VANDER WEIDE IS CRITICAL THAT YOU CONSIDER GEOMETRIC**  
5 **MEAN AVERAGES IN ADDITION TO ARITHMETIC AVERAGES WHEN**  
6 **EVALUATING THE APPROPRIATE RISK PREMIA. HE SAYS THAT**  
7 **IBBOTSON ASSOCIATES ARGUES THAT YOU SHOULD ONLY LOOK AT**  
8 **THE ARITHMETIC MEAN WHEN ESTIMATING A HISTORICAL RISK**  
9 **PREMIUM. (VANDER WEIDE REBUTTAL, P. 57) IS YOUR ANALYSIS**  
10 **DEPENDENT ON WHAT IBBOTSON ASSOCIATES SAYS?**

11 A. No. My analysis considers the arguments and data of Ibbotson Associates and also of  
12 numerous other scholars and practitioners. Damodaran, for example, recommends and  
13 utilizes geometric averages.

14 **Q. DOES DR. VANDER WEIDE RELY ON WHAT IBBOTSON ASSOCIATES SAY?**

15 A. Dr. Vander Weide's reliance on the Ibbotson Associates approach is quite selective. As  
16 noted above, in prior testimony he did not accept its foundational theory that the equity  
17 risk premium is stable over time. He also ignores several other key propositions  
18 embraced by Ibbotson Associates in the Valuation Edition 2001 Yearbook. These  
19 propositions, if accepted, pull the linchpin from his entire analysis:

20 1. The cost of capital is always an expectational or forward-looking concept (p. 9);

<sup>70</sup>

Ibbotson Associates, Stock Bonds Bills and Inflation 2000 Yearbook, p. 124.

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- 1           2.     The risk of the loss of business to competitors is unsystematic (*i.e.*, investors can
- 2                   diversify it away) so it is not entitled to a risk premium (p. 36);
- 3           3.     Multi-stage DCF models give better estimates of the cost of equity than does the
- 4                   perpetual growth model which Dr. Vander Weide utilizes (p. 47);
- 5           4.     The terminal stage growth-rate in the DCF model should be sustainable. An
- 6                   example of an indefinitely sustainable growth rate is the expected long-run growth
- 7                   rate of the economy. (p. 47).

8   **Q.   DR. VANDER WEIDE ARGUES THAT THE CONCEPT OF SURVIVORSHIP**  
9       **BIAS IN MEASURING HISTORIC WORLD EQUITY RETURNS FOR**  
10      **ESTIMATING AN EQUITY RISK PREMIUM DOES NOT APPLY TO STOCKS**  
11      **TRADING IN THE U.S. MARKET. (VANDER WEIDE REBUTTAL, P. 58) IS**  
12      **THIS A LOGICAL INTERPRETATION OF THE THEORY?**

13   A.   No. His view, and in this instance, Ibbotson Associates' view,<sup>71</sup> is an extreme one. The  
14       theory postulates that historical U.S. stock returns overstate the returns you would have  
15       obtained if you had been an international investor and had also invested in stock markets  
16       which performed poorly relative to the U.S. stock market. In other words, using the  
17       historical returns of a single, successful national stock market to estimate future returns  
18       does not accurately reflect potential losses if a stock market were to perform poorly. As  
19       of 1925 for example, you would not have known before the fact that the U.S. market was  
20       going to be successful. Even if you had invested solely in U.S. stocks, there was a chance

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<sup>71</sup> Ibbotson Associates does state that the survivorship bias evidence is "compelling on a worldwide basis." The Valuation Edition 2001 Yearbook , Ibbotson Associates, p. 73.



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1       that the U.S. market would have been one of the failures, and that you would have lost  
2       much if not all of your money.

3               Of course, investors planning to hold an international portfolio of stocks will  
4       estimate returns on the expectations for an international stock portfolio, not just on the  
5       returns derived from stocks of companies in a single country. Dr. Vander Weide seems  
6       to be saying with his argument that all investors in Verizon own, or will purchase *only*  
7       U.S. stocks. This assumption is clearly not true. Verizon is one of the component  
8       companies of the S&P 500, an index whose stocks are widely held by giant pension,  
9       mutual fund and other managed portfolios, many of which are located and/or have  
10      investors outside of the U.S., or themselves have diversified into various international  
11      holdings.

12             One need only look at how Verizon currently describes itself to understand its  
13      global position:

14                     Verizon Communications is one of the world's leading providers of  
15                     communications services. Verizon companies are the largest  
16                     providers of wireline and wireless communications in the United  
17                     States, with 112 million access line equivalents and 27 million  
18                     wireless customers. Verizon International has investment interests in  
19                     telecommunications companies in 19 countries, with a global  
20                     presence that extends to 40 countries in the Americas, Europe, Asia  
21                     and the Pacific. Verizon has 3.2 million proportionate access lines  
22                     and 8.3 million proportionate wireless subscribers. It is a Fortune 10  
23                     company with approximately 260,000 employees and more than \$65  
24                     billion in annual revenues.

25                     Verizon is superbly positioned to capitalize on worldwide growth  
26                     trends that are transforming global telecommunications. Verizon  
27                     Global Solutions Inc. is building a global network to provide  
28                     seamless end-to-end communications by delivering data, voice, and  
29                     internet solutions to customers around the world. Verizon's global

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1 network will link North America with major cities in Europe, Asia  
2 and Latin America, and provide intra-regional communications.  
3 Verizon's scale and scope make it the number one partner for anyone  
4 wanting to access the U.S. market.<sup>72</sup>

5 Dr. Vander Weide's view also poses a classic finance arbitrage. He is  
6 fundamentally saying that an investor in only U.S. stocks would have one cost of capital  
7 for Verizon, while an international stock investor would have a lower cost of capital for  
8 the same company. Therefore, one investor would apply the higher U.S. market-based  
9 risk premium and value the multi-national company at a lower price, while another  
10 investor would apply the lower world risk premium and value it at a higher price.  
11 Because the international investor can pay more for Verizon, even in the U.S. stock  
12 markets, it would bid up the price and arbitrage away price discrepancies caused by the  
13 local investor's parochial cost of capital.

14 **II. DR. VANDER WEIDE HAS ASSUMED A CAPITAL STRUCTURE**  
15 **THAT IS INAPPROPRIATE FOR THE WHOLESALE BUSINESS OF**  
16 **SUPPLYING UNBUNDLED NETWORK ELEMENTS.**

17 **Q. DR. VANDER WEIDE OFFERS AN ELABORATE ARGUMENT AGAINST THE**  
18 **THEORETICAL SOUNDNESS OF USING A BUSINESS'S BOOK CAPITAL**  
19 **STRUCTURE. (VANDER WEIDE REBUTTAL, PP. 25-26) HE CLAIMS THAT**  
20 **YOU BASE YOUR COST OF CAPITAL ESTIMATE ON THE BOOK CAPITAL**  
21 **STRUCTURE FOR VERIZON-VA. (VANDER WEIDE REBUTTAL, P. 25)**  
22 **IS DR. VANDER WEIDE CORRECT?**

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<sup>72</sup> <http://www.verizon.com/international/>.